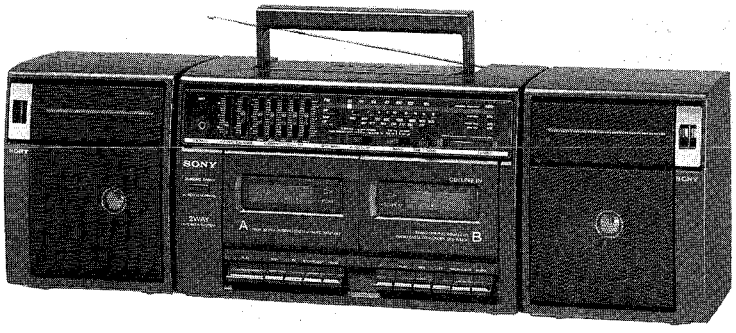
CFS-W420L

SERVICE MANUAL

AEP Model



This set is the almost same as CFS-W410L.
Refer to CFS-W410L Service Manual previously issued for the information of this set.
The following parts differ from those in CFS-W410L.

• DIFFERENT PARTS (SECTION 4)

Page	No.	Part No.	Description
19	4	X-3363-473-1	HOLDER (B) ASSY, CASSETTE
	5	X-3363-359-1	HOLDER (A) ASSY, CASSETTE
	6	X-3363-474-1	CABINET (FRONT) ASSY (EE1)
	6	X-3363-475-1	CABINET (FRONT) ASSY (AEP)
	20	*A-3275-195-A	MAIN BOARD, COMPLETE (AEP)
	20	*A-3275-196-A	MAIN BOARD, COMPLETE (EE1)

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• Abbreviation
EE1 : East European

MICROFILM

RADIO CASSETTE-CORDER

SONY®

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  EE1 : East European

• DIFFERENT PARTS (SECTION 5)

Page	Ref. No.	Part No.	Description
23		*A-3275-195-A	MAIN BOARD, COMPLETE (EXCEPT EE1)
		*A-3275-196-A	MAIN BOARD, COMPLETE (EE1)
	C11	1-162-193-31	CERAMIC 3.3PF 10% 50V DELETE
	C12	1-124-902-00	ELECT 0.47 μF 20% 50V DELETE
24	D2	8-719-987-01	DIODE KDS2236 DELETE
25	R2	1-249-441-11	CARBON 100K 5% 1/4W DELETE
	R3	1-249-441-11	CARBON 100K 5% 1/4W DELETE
	R4	1-249-402-11	CARBON 56K 5% 1/4W CHANGE

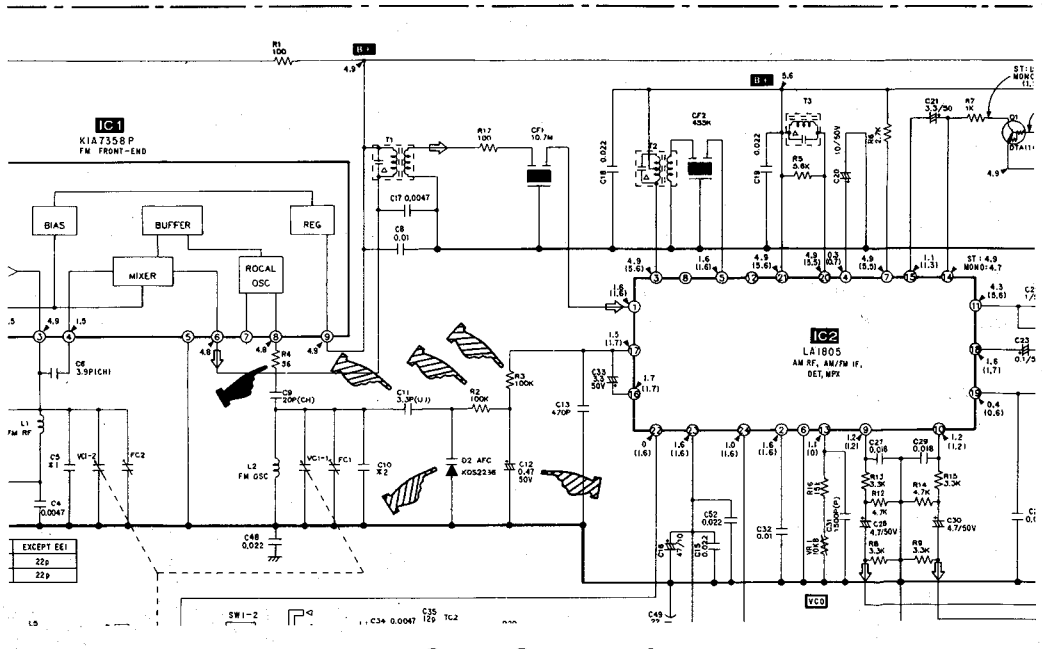
ACCESSORY & PACKING MATERIAL

*3-369-662-01	INDIVIDUAL CARTON (EXCEPT EE1)
*3-370-137-01	INDIVIDUAL CARTON (EE1)
3-753-268-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, GERMAN) (AEP)
3-753-268-41	MANUAL, INSTRUCTION (PORTUGUESE/DUTCH/SWEDISH/ITALIAN) (AEP)
3-753-268-51	MANUAL, INSTRUCTION (ENGLISH/GERMAN/POLAND/RUSSIAN) (EE1)

[SCHEMATIC DIAGRAM]

• TUNER SECTION (Page 15, 16)

: DELETE PARTS : CHANGE PART



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General Audio Group

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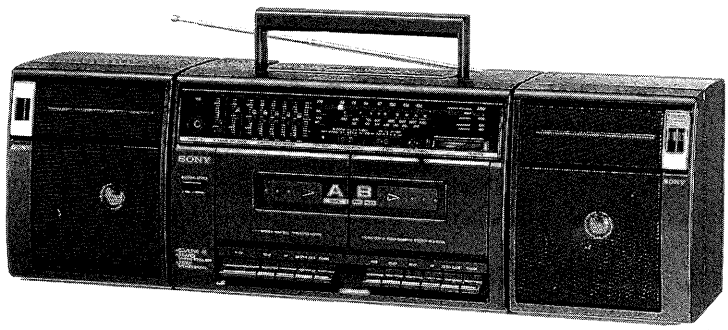
CFS-W410L

SERVICE MANUAL

AEP Model
UK Model



Model Name Using Similar Mechanism		New
Tape Transport Mechanism Type	DECK A	MF-W320 (YMW47-403)
	DECK B	

SPECIFITATIONS

Frequency range

Sales area	FM	MW	LW	SW
AEP/UK/ Germany/ Australian	87.6– 107MHz	531– 1,602kHz	153– 279kHz	5.95–18MHz
Italian	87.5– 108MHz	526.5– 1,606.5kHz	148.5– 283.5kHz	
East European	65– 108MHz	531– 1,602kHz	153– 279kHz	

Recording system — 4-track 2-channel stereo
Frequency response — 80–8,000Hz
Speakers — Two way
Approx. 10cm (4 inches) dia. woofer×2
Approx. 2cm (13/16 inch) dia. tweeter×2
Maximum power output
5W (2.5W+2.5W)
Input — CD/LINE IN jacks
(stereo phono jacks) (2)
Input impedance 47 kilohms
Sensitivity 0.44V
Output — Headphones jack (stereo minijack) for 8–300-ohm impedance headphones

Power requirements

UK, Australian Model	240V AC, 50Hz
EXCEPT UK, Australian Model	220V AC, 50Hz

9V DC, six R20 (size D) batteries

Power consumption

UK model	18W
Except UK Model	14W

Battery life

Battery	FM recording
Sony SUM-1 (NS)	Approx. 18 hours
Sony AM1 (N) alkaline	Approx. 30 hours

Dimensions — Approx. 605×195×160mm (w/h/d) (23 7/8 ×7 3/4 ×6 3/8 inches)
Weight — Approx. 4.5kg (9 lb 15 oz) incl. batteries
Accessory supplied — AC power cord (1)

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Design and specifications subject to change without notice.

RADIO CASSETTE-CORDER

SONY®

TABLE OF CONTENTS

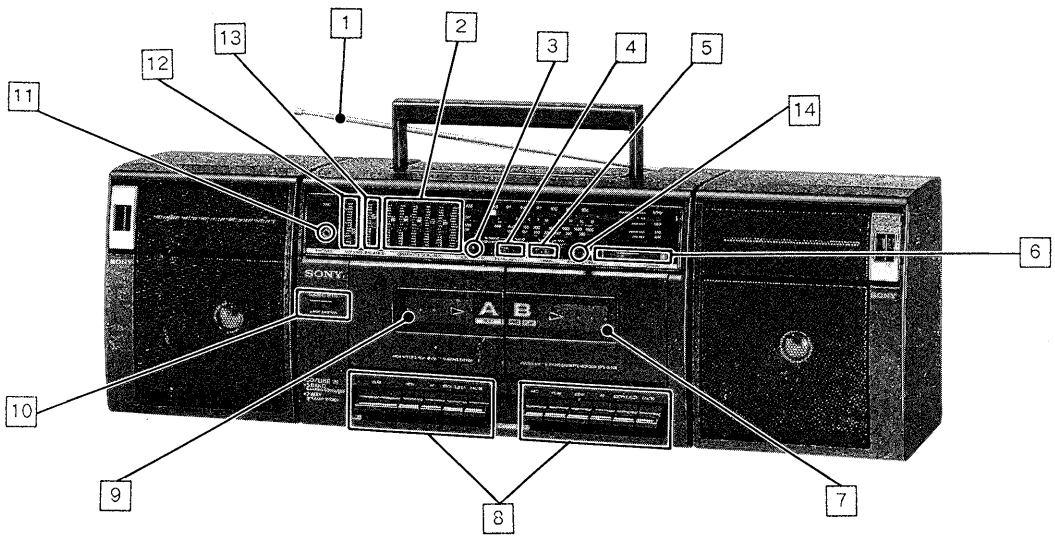
Section	Title	Page
	Specifications	1
1.	**GENERAL**	
	Location and Function of Controls	3
	Tape Playback (either deck)	4
	Listening to the Radio	4
	Recording (deck B only)	4
	Tape Dubbing (deck A to deck B)	4
	Dial Pointer Instllation	5
2.	**ADJUSTMENTS**	6
3.	**DIAGRAMS**	
3-1.	Semiconductor Lead Layouts	11
3-2.	Printed Wiring Boards	12
3-3.	Schematic Diagram	15
4.	**EXPLODED VIEWS**	19
5.	**ELECTRICAL PARTS LIST**	22

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

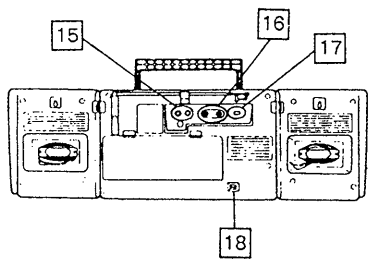
LOCATION AND FUNCTION OF CONTROLS



【FRONT panel】

1 Telescopic antenna
2 5-BAND GRAPHIC EQUALIZER controls
3 OPR/BATT indicator
4 FUNCTION selector
5 BAND selector
6 TUNING knob
7 Cassette holder B
8 Tape operation buttons
- ● REC (record) button : (deck B onlly)
- ▷ PLAY (play back) button
- ◁◁ REW (rewind) button
- ▷▷ FF (farst-forward) button
- ▯⏏ STOP/EJECT. button
- ▯▯ PAUSE button

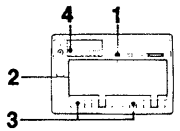
9 Cassette holder A
10 DUBBING SPEED button
11 PHONES (headphones) jack (stereo minijack)
12 VOLUME knob
13 BALANCE knob
14 FINE TUNING knob



【REAR panel】

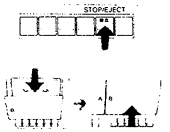
15 CD/LINE IN pin-jack
16 SPEAKER (L, R) jack (monoral minijack)
17 ISS (interference supperess switch) /FM MODE selector
18 AC IN

Tape Playback
(either deck)



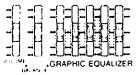
1

2 Insert a cassette.



3

4 Adjust VOLUME, BALANCE and GRAPHIC EQUALIZER, if necessary.



To stop playback

Tape operating buttons

To wind tape rapidly	▶▶
To rewind tape rapidly	◀◀
To stop playback/recording	■⏏
To release ▶▶ or ◀◀	■⏏
To pause playback/recording	❚❚

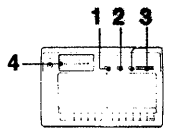
Be sure to press ■⏏ to release ▶▶ or ◀◀ at the tape end.

Notes
- During playback, avoid pressing the PLAY/REW/FF buttons of the other deck since the playback speed may vary.
- When both decks A and B are in the playback mode, only playback from deck B will be audible.

For private listening
Connect stereo headphones to PHONES jack.

When the unit is in use
OPR/BATT (operation/battery) indicator lights. Intensity of glow shows battery level.

Listening to the Radio

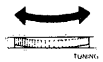


1

2 Select the desired band.

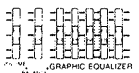
CFS-W410S CFS-W410L

3 Tune in a desired station.

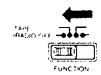


For better SW reception

4 Adjust VOLUME, BALANCE and GRAPHIC EQUALIZER, if necessary.



To turn off the radio



Antenna adjustment

FM
UKW

MW/LW

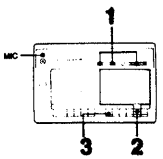
SW
KW

Graphic equalizer adjustments
These are the frequency coverages of the equalizer controls.

100 Hz:	bass.
300 Hz:	speaking voice, middle frequencies of instrumental music.
1 kHz:	singing vocals. Boost for increased "presence."
3 kHz:	overall brightness of sound.
10 kHz:	general treble. Lower to reduce noise.

Raise control to emphasize a frequency band, lower to deemphasize.

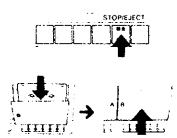
Recording
(deck B only)



1 From radio

From built-in microphone

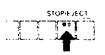
2 Insert a cassette.



3

▶ is pressed automatically

To stop recording



When the tape reaches the end, ● REC and ▶ PLAY are released automatically

Notes on recording
- While recording, avoid pressing the PLAY/REW/FF buttons of deck A to assure stable recording.
- If a whistling noise is heard during MW/LW recording, which was inaudible before the record button is depressed, set ISS/FM MODE on the rear panel to 1, 2, or 3, depending on which one best reduces the noise.
- While recording from the built-in radio, you can listen to the program through speakers or headphones. While recording with the built-in microphone, the sound being recorded can be monitored through headphones.
- No recording level adjustment is necessary.

To prevent accidental erasure

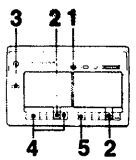
To protect side A recording

Break off the tab of side A.

To reuse a cassette

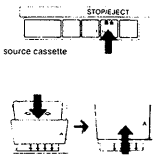
Cover each slo with plastic tape

Tape Dubbing
(deck A to deck B)



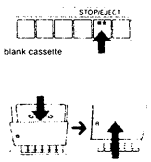
1

2 deck A



source cassette

deck B



blank cassette

3 Select dubbing speed.

To dub at high speed To dub at normal speed

4 on deck A

Depress ▶ and depress ❚❚ at the point you want to start dubbing.

5 on deck B

A and B tapes start simultaneously
This means tape dubbing starts (Synchro dubbing)

To stop dubbing

on deck A and deck B

After dubbing, set FUNCTION to TAPE (RADIO OFF)

Notes on dubbing
- If deck A's tape finishes first, deck B will continue playing. (Manually press ■⏏ to release locked buttons).
- If deck B's tape finishes first, deck A will continue playing.
- Do not change the dubbing speed during dubbing. As this causes excessive wow and flutter.

This section is extracted from instruction manual.

DIAL POINTER INSTLLATION

1. Insert the pointer end into the clearance Ⓐ between MAIN CHASSIS and WHEEL GEAR to mesh.

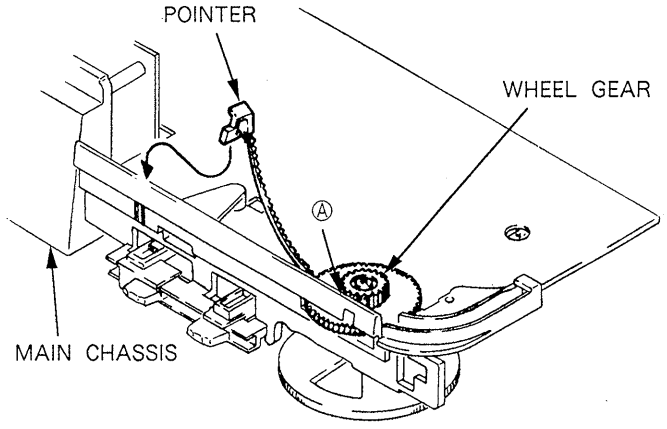


Fig. 1

2. Turn TUNING KNOB so that the end of POINTER (point mark side) comes to the pointer guide.

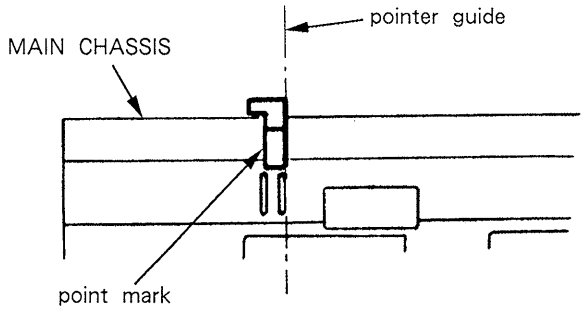


Fig. 2

3. Turn VC fully in the direction of arrow and set WHEEL DRUM to VC as shown on Fig. 3.

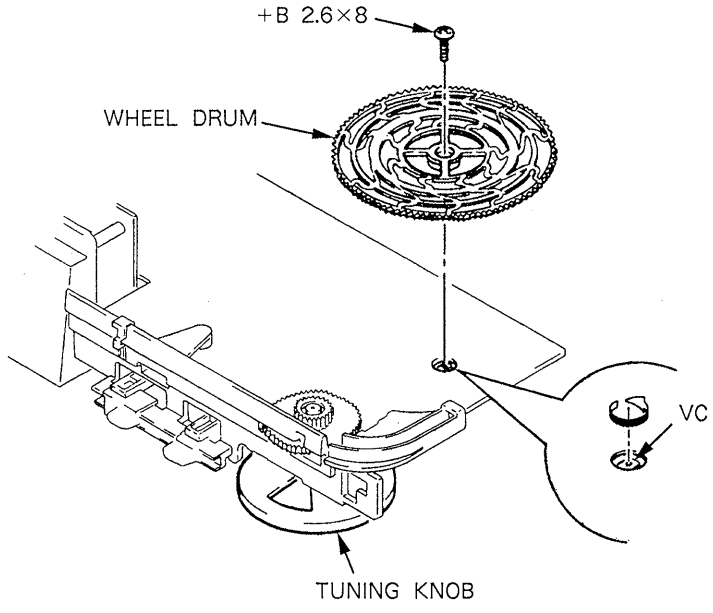


Fig. 3

SECTION 2
ADJUSTMENTS

TAPE SECTION

2-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head　　erase head
   capstan　　rubber belts
   pinch roller
   idlers
2. Demagnetize the head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torgue Measurement　　A-B DECK

Torque	Torque Meter	Meter Reading
Playback	CQ-102C	30-70g · cm (0.42-0.97 oz · inch)
Rewind / Fast Foward	CQ-201B	more than 60g · cm (0.834 oz · inch)
Back Tension	CQ-102C	1.5-6g · cm (0.021-0.083 oz · inch)

Tape Tension Measurement

Meter	Meter Reading
CQ-403A	more than 150g (5.29 oz)

2-2. ELECTRICAL ADJUSTMENTS

Note : The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.
  FUNCTION : TAPE (RADIO OFF)
  VOLUME : standerd output
  BALANCE : mechanical mid
  GRAPHIC EQUALIZER : mechanical mid
- Standard Output Level

Output Terminal	PHONES	Speakers
load impedance	32 Ω	3.2 Ω
output level	0.25V (-10dB)	0.775V (0dB)

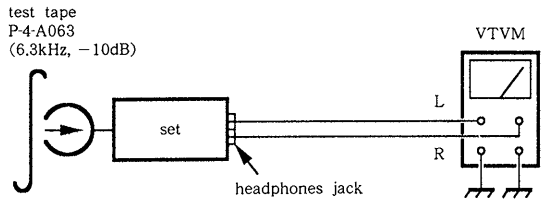
Test tape :

Type	Signal	Used for
WS-48B	3kHz, 0dB	Tape Speed Adjustment
P-4-A063	6.3kHz, -10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment

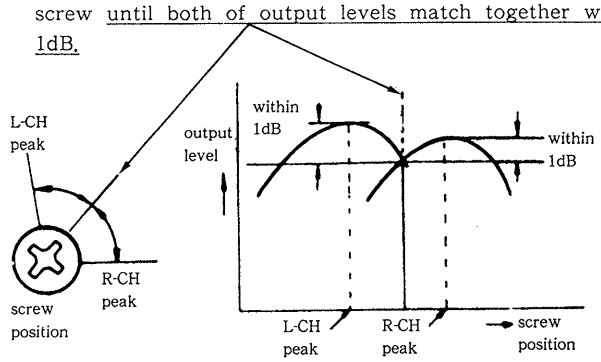
Record/playback Head Azimuth Adjustment　　DECK A / DECK B

Procedure :

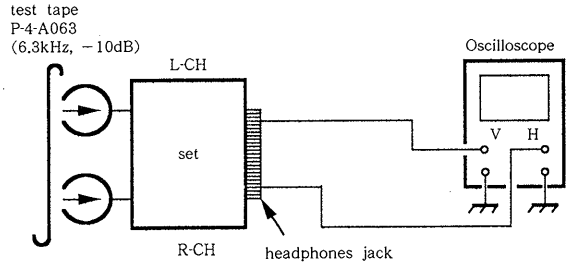
1. Mode : FWD playback

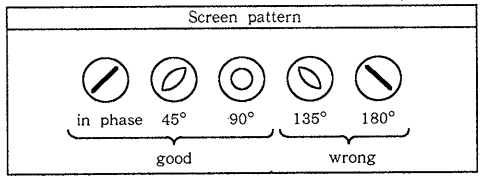


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



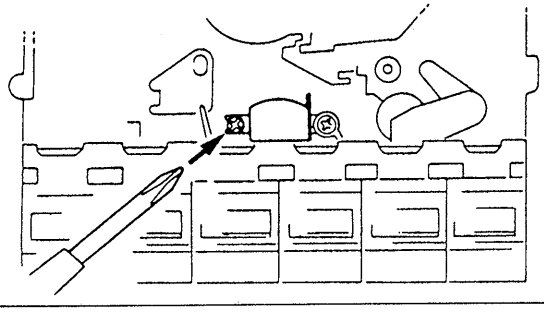
Phase Check
Mode : playback





3. Set in the reverse mode and repeat the steps 1-2.
4. After the adjustment, lock the screws with locking compound.

Adjustment Location : Remove the Front Cabinet Assy



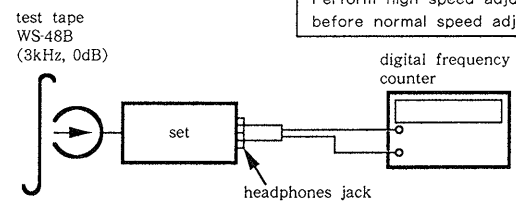
Tape Speed Adjustment

DECK A | DECK B

Procedure :

Mode : playback

Perform high speed adjustment before normal speed adjustment.

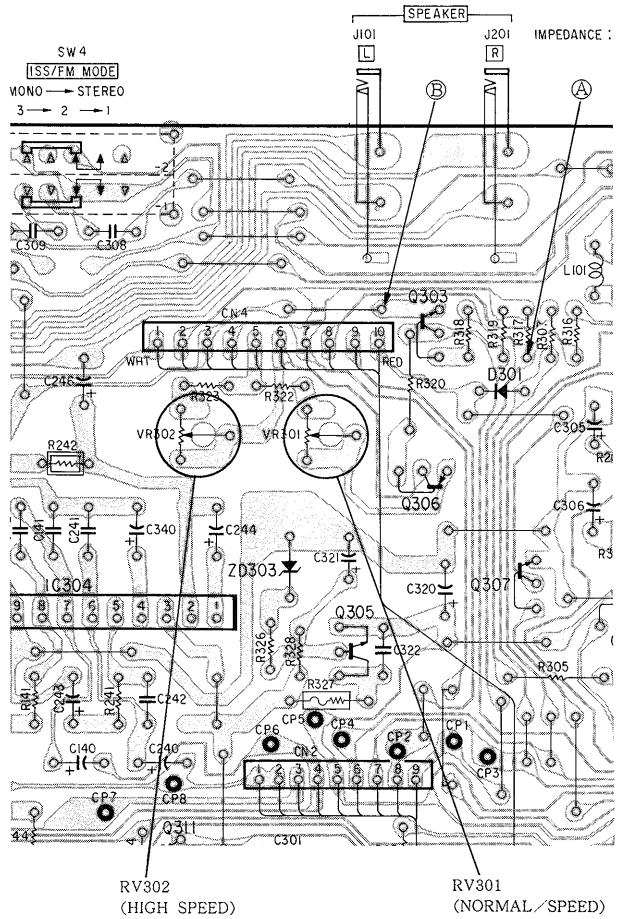


Connect point Ⓐ and Ⓑ with lead wire.
(It results in HIGH SPEED mode.)

Specifications :

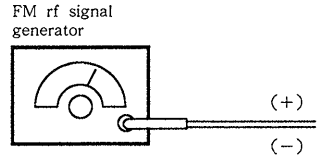
	Adjustment part	Adjust point	Digital frequency counter
High speed	Deck B VR302	Ⓐ – Ⓑ	5,990 to 6,010Hz
	Deck A confirm	SHORT	
Normal speed	Deck B VR301	Ⓐ – Ⓑ	2,990 to 3,010Hz
	Deck A confirm	OPEN	

Adjustment Location : Main board



RADIO SECTION

FM Section



22.5kHz frequency deviation by 400Hz signal
Output level : as low as possible

FM SECTION

FM IF ALIGNMENT	
Adjust for a maximum reading on VTVM.	
T1	10.7MHz
T3	10.7MHz

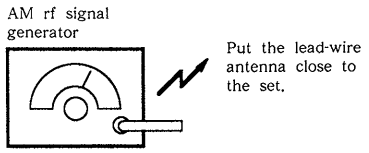
FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
FC1	108.3MHz (108.25MHz) 〈107.8MHz〉 ((109.5MHz))
L2	87MHz (87.35MHz) 〈87.35MHz〉 ((64MHz))

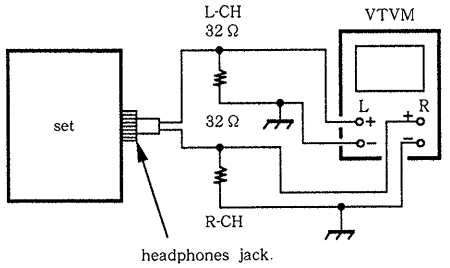
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
FC2	108.3MHz (107.8MHz) 〈108.25MHz〉 ((105MHz))
L1	87MHz (87.35MHz) 〈87.35MHz〉 ((70MHz))

no mark : AEP/UK/AU
( ) : IT
〈 〉 : G
(( )) : EEI

AU : Australian
G : Germany
IT : Italian
EEI : East European

AM Section


AM rf signal generator
Put the lead-wire antenna close to the set.
30% amplitude modulation by 400Hz signal
Output level : as low as possible



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM SECTION

AM IF ALIGNMENT	
Adjust for a maximum reading on VTVM.	
T2	455kHz

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
TC5	300kHz (293kHz)
L4	145kHz (140kHz)

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
AC2	260kHz
L7	160kHz

MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
TC4	1,680kHz (1,630kHz)
L8	515kHz (516kHz)

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
TC3	1,400kHz
L3	620kHz

SW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
TC2	18.4MHz
L6	5.8MHz

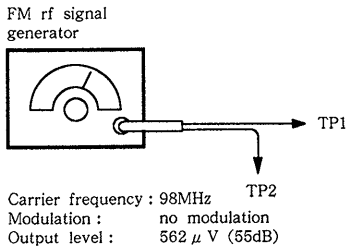
SW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
TC1	18.4MHz
L5	5.8MHz

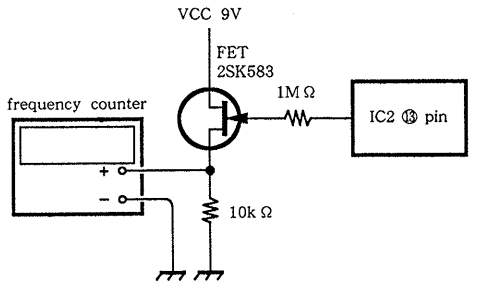
no mark : AEP／UK／AU／G／EEI
( ) : IT

AU : Australian
G : Germany
IT : Italian
EEI : East European

VCO Adjustment

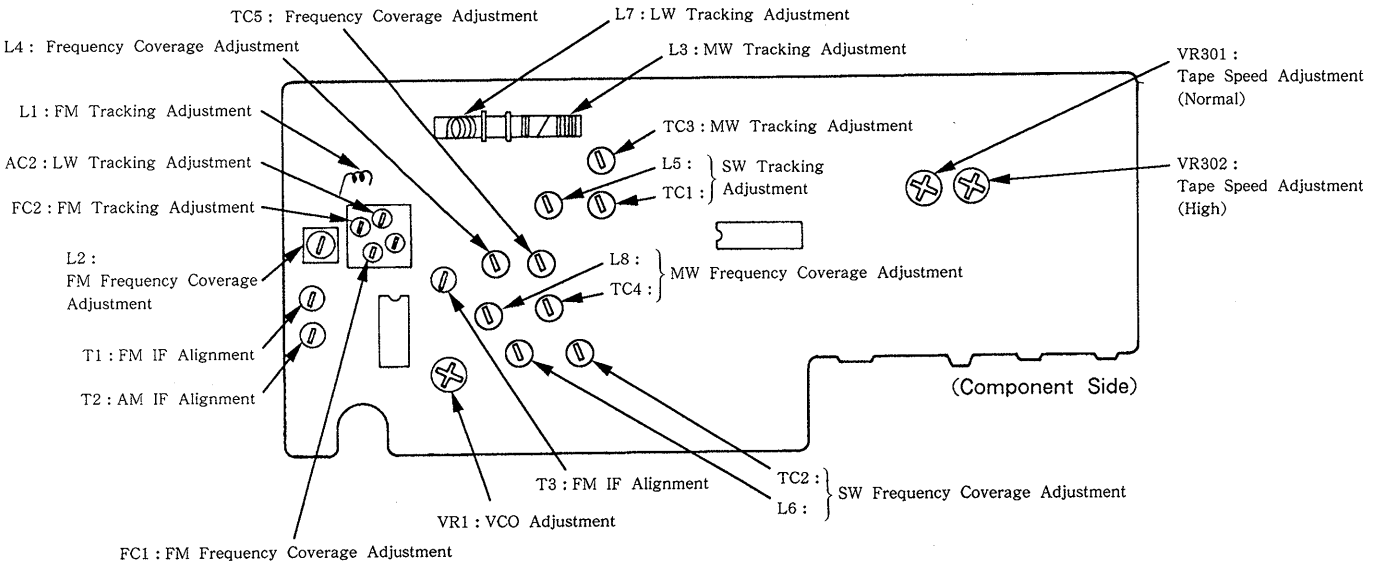
Procedure :





1. Connect frequency counter to IC2 ⑬ pin using left circuit.
2. Tune the set to 98MHz.
3. FM MODE SWITCH (SW4) should be set STEREO positions.
4. Adjust VR1 for 76kHz±0.2kHz reading on the frequency counter.

Adjustment Location : main board


TC5 : Frequency Coverage Adjustment
L7 : LW Tracking Adjustment
L4 : Frequency Coverage Adjustment
L3 : MW Tracking Adjustment
VR301 : Tape Speed Adjustment (Normal)
L1 : FM Tracking Adjustment
TC3 : MW Tracking Adjustment
AC2 : LW Tracking Adjustment
L5 : TC1 : SW Tracking Adjustment
VR302 : Tape Speed Adjustment (High)
FC2 : FM Tracking Adjustment
L2 : FM Frequency Coverage Adjustment
L8 : TC4 : MW Frequency Coverage Adjustment
T1 : FM IF Alignment
T2 : AM IF Alignment
(Component Side)
T3 : FM IF Alignment
TC2 : L6 : SW Frequency Coverage Adjustment
VR1 : VCO Adjustment
FC1 : FM Frequency Coverage Adjustment

SECTION 3
DIAGRAMS

Note on Schematic Diagram :

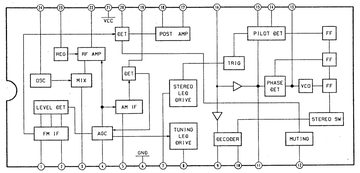
- All capacitors are in μF unless otherwise noted. pF : μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- : fusible resistor.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line
- : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM (RADIO SECTION)
  Playback (AUDIO SECTION)
  ( ) : AM (RADIO SECTION)
  REC (AUDIO SECTION)
  ( ) : DUBBING
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : FM
  : PB (DECK A)
  : PB (DECK B)
  : REC (DECK B)

• IC BLOCK DIAGRAM

IC2 LA1805



3-1. SEMICONDUCTOR LEAD LAYOUTS

BA3308
TA7358

KTC9013

BA3822LS

GL-3PR9

DTA114ES
DTC114ES

KDS2236
RD6.8FB2
10E2
1S2472

2SA733-K
2SC2001-K2
2SC2878-B

1S202-1

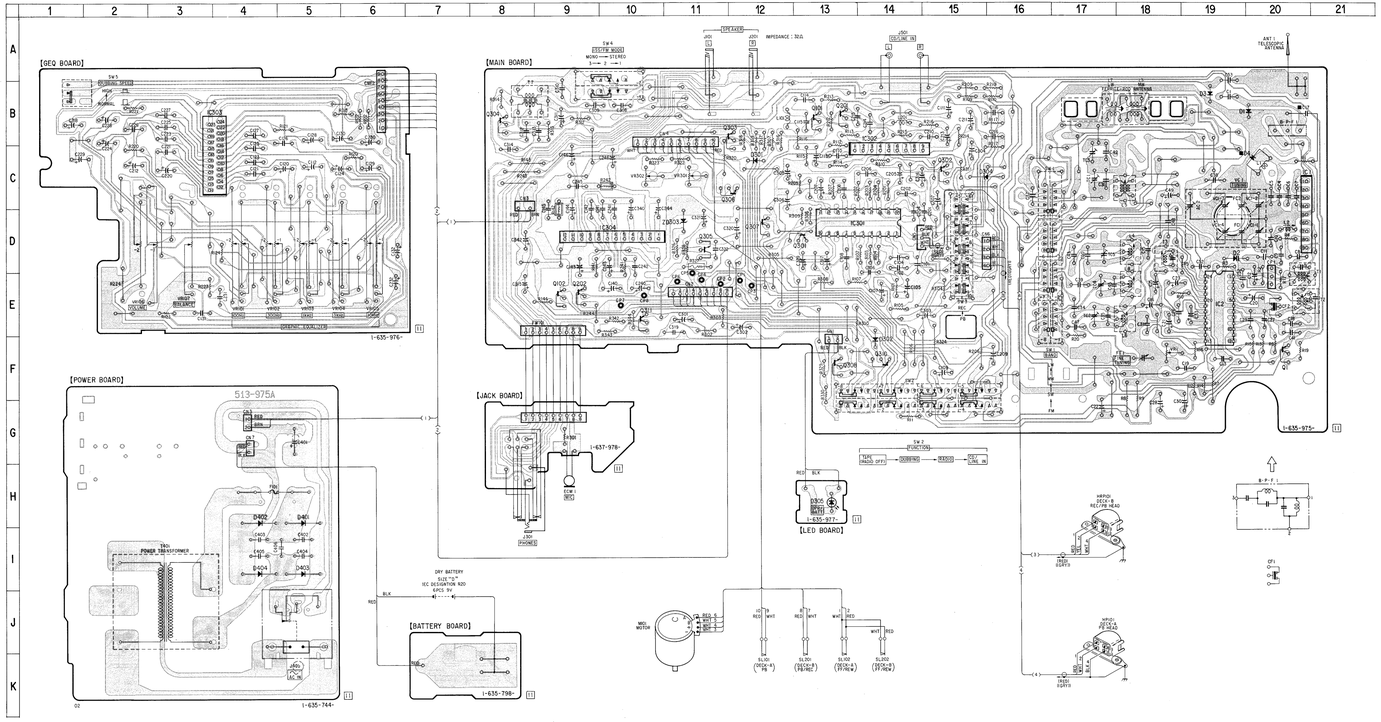
• SEMICONDUCTOR LOCATION

Ref. No.	Location
D1	B-20
D2	D-19
D3	B-19
D4	C-20
D301	C-12
D302	F-14
D304	C-15
D305	H-13
D401	H-5
D402	H-4
D403	I-5
D404	I-4
IC1	D-20
IC2	E-19
IC301	D-14
IC302	C-14
IC303	C-4
IC304	D-10
Q1	F-20
Q101	B-13
Q102	E-9
Q201	B-13
Q202	E-9
Q301	D-13
Q302	C-15
Q303	B-12
Q304	B-8
Q305	D-11
Q306	C-11
Q307	D-12
Q308	F-13
Q310	F-14
Q311	E-10

Note :

- : parts extracted from the component side.
- : Pattern on the side which is seen.

3-2. PRINTED WIRING BOARDS



3-3. SCHEMATIC DIAGRAM • Refer to page 10 for Schematic Diagram note and IC Block Diagram.

[MAIN BOARD (1/2)]
IC1
KIA7358P
FM FRONT-END
BIAS
BUFFER
REG
RF
MIXER
ROCAL OSC
B.P.F.1
ANT1 TELESCOPIC ANTENNA
IC2
LA1805
AM RF, AM/FM IF, DET, MPX
SW4-2
ISS/FM MODE
STEREO
MONO
SW1-7
BAND
FM
SW
MW
LW
VCO
*1, 2
Ref. EE1 EXCEPT EE1
C5 8.2p 22p
C10 6.8p 22p
L3, L7
FERRITE-ROD ANTENNA
LW ANT
MW ANT
FINE TUNING
[MAIN BOARD (2/2)]
J501-1
CD/LINE IN
J501-2
HP101-1
DECK-A
PB HEAD
HRP101-1
DECK-B
REC/PB HEAD
HP101-2
HE101
ERASE HEAD
IC301
LA3246(1/2)
PB PRE AMP
IC302
BA3308 (1/2)
RECORD AMP
IC302 (2/2)
[GEQ BOARD]
IC303
BA3822L (1/2)
BA3822L
GRAPHIC EQUALIZER
VOLUME
BALANCE
Q102
KTS2878
MUTE
Q202
KTC2878
MUTE
IC304
KIA7282 (1/2)
POWER AMP
KIA7282 (2/2)
POWER AMP
[JACK BOARD]
J101
SPEAKER
ECM1
MIC
J301
PHONES
J201
SPEAKER
SW5
DUBBING SPEED
HIGH ← NORMAL
NORMAL SPEED
HIGH SPEED
SW2
FUNCTION
CD/LINE IN
RADIO
DUBBING
TAPE (RADIO OFF)
SW3
PB
REC
T7
TAPE OSC
Q304
KTC1959Y
BIAS OSC
Q303
KTC1959Y
HIGH/NORMAL SWITCH
Q305
KTC9013A
Q306
KTA1015Y
SPEED CONTROL
Q307 DTC114TS
DUBBING SWITCH
Q308
C114TS
SWITCH
Q310
DTA114ES
SWITCH
Q311
DTA114ES
MUTE DRIVE
[LED BOARD]
D305
SLR34
OPR/BATT
SL101
DECK-A
PB
SL201
DECK-B,
PB/REC
SL102
DECK-A
FF/REW
SL202
DECK-B
FF/REW
M101
MOTOR
DRY BATTERY
SIZE "D"
IEC DESIGNATION R20
6PS 9V
[POWER BOARD]
D401,402,403,404 : 1N4002
C402,403,404,405 : 0.022
T401
POWER TRANSFORMER
J401
AC IN
F101
1.25A
TOTAL CURRENT
FM:65mA
AM:60mA
DECK A { PLAY:150mA FF:130mA REW:129mA
DECK B { PLAY/REC:151mA FF:130mA REW:128mA
DUBBING { NORM:200mA HIGH:202mA

SECTION 4
EXPLODED VIEWS

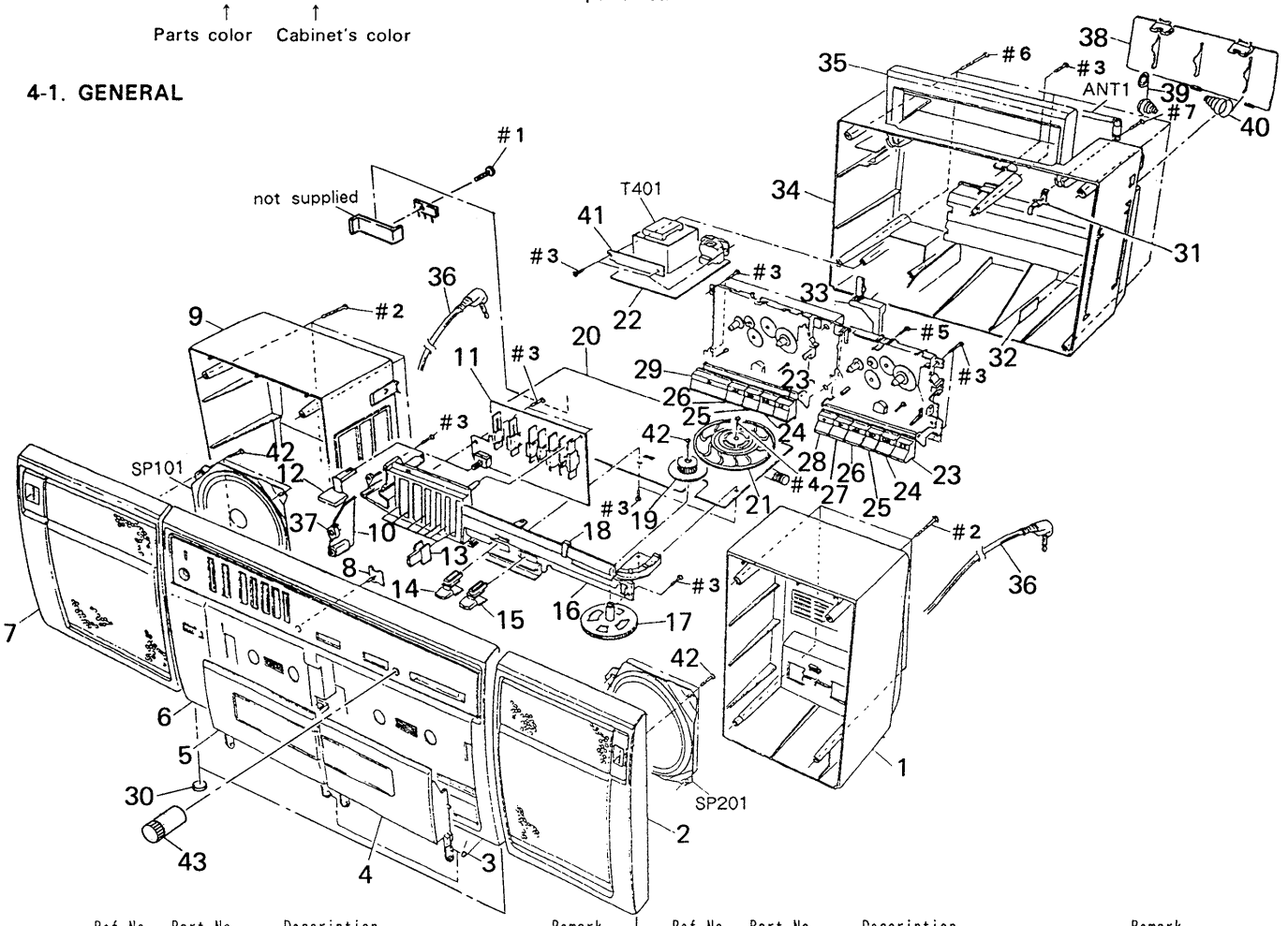
NOTE:

- −XX, −X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE)....(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

AU : Australian
G : Germany
IT : Italian
EEI : East European

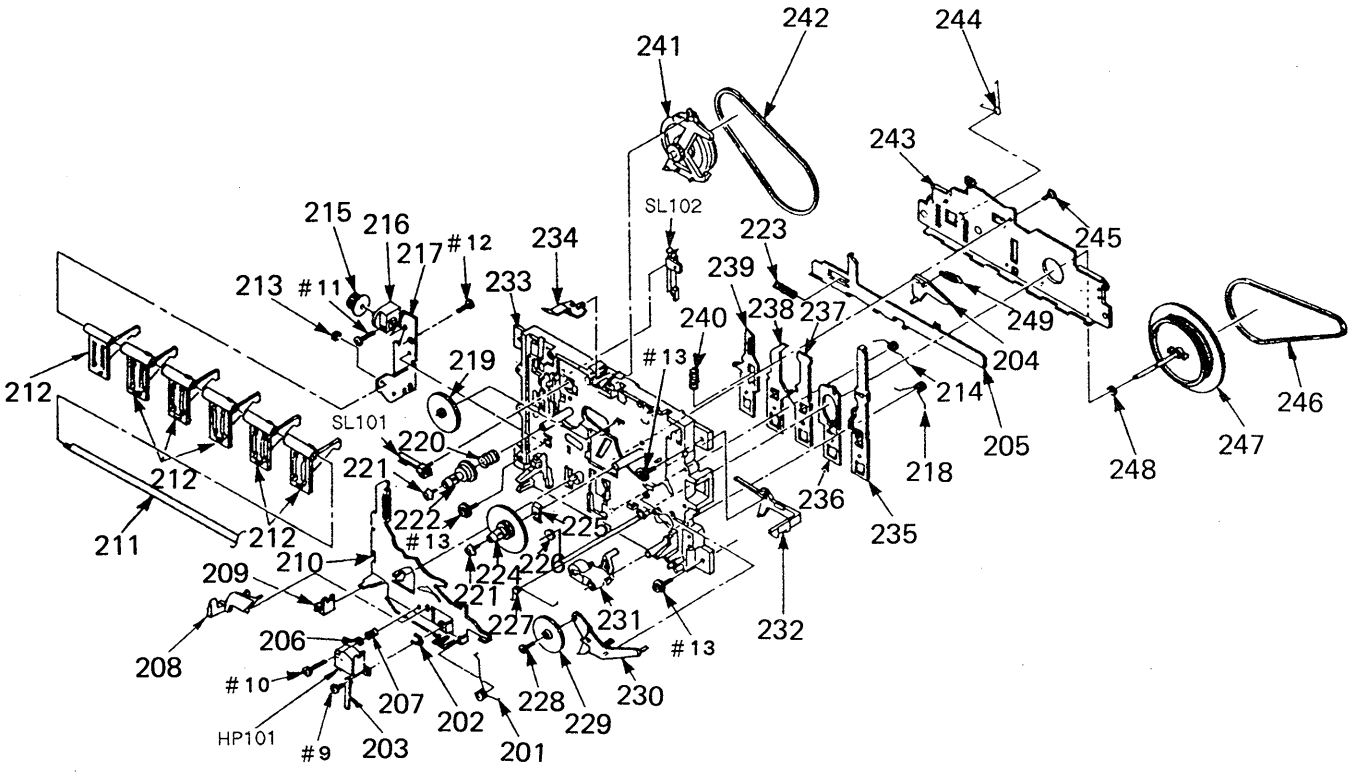
4-1. GENERAL



Ref. No.	Part No.	Description	Remark
1	3-393-888-01	SPEAKER REAR-R	
2	X-3391-053-1	SPEAKER FRONT (R) ASSY	
3	3-393-892-01	EJECT SPRING	
4	X-3362-393-1	HOLDER (B) ASSY, CASSETTE	
5	X-3391-050-1	HOLDER (A) ASSY, CASSETTE	
6	X-3362-391-1	CABINET (FRONT) ASSY (EE1)	
6	X-3362-392-1	CABINET (FRONT) ASSY (IT)	
6	X-3362-394-1	CABINET (FRONT) ASSY (AEP, G, UK, AU)	
7	X-3391-052-1	SPEAKER FRONT (L) ASSY	
8	* 1-635-977-11	LED BOARD	
9	3-393-890-01	SPEAKER REAR-L	
10	* 1-635-978-11	JACK BOARD	
11	* 1-635-976-11	GEQ BOARD	
12	3-397-823-01	KNOB DUBBING	
13	3-397-816-01	KNOB VOL/EQ	
14	3-397-818-01	KNOB FUNCTION	
15	3-397-817-01	KNOB BAND	
16	* 3-397-815-01	CHASSIS, MAIN	
17	3-397-819-01	KNOB TUNING	
18	3-397-822-01	GEAR POINTER	
19	3-397-820-01	GEAR TUNING	
20	* A-3261-409-A	MAIN BOARD, COMPLETE (EXCEPT EE1)	
20	* A-3261-410-1	MAIN BOARD, COMPLETE (EE1)	
21	3-397-821-01	GEAR PULLEY	
22	* 1-635-974-11	POWER BOARD	

Ref. No.	Part No.	Description	Remark
23	3-397-805-01	KNOB DECK PAUSE	
24	3-397-804-01	KNOB DECK ST/EJ	
25	3-397-802-01	KNOB DECK FF	
26	3-397-803-01	KNOB DECK REW	
27	3-393-899-01	KNOB DECK PLAY-R (B)	
28	3-397-801-01	KNOB DECK REC	
29	3-393-898-01	KNOB DECK PLAY-L (A)	
30	3-366-762-01	CUSHION (FOOT-RUBBER)	
31	* 3-397-810-01	ANT LUG	
32	1-635-798-11	BATTERY BOARD	
33	3-397-806-01	LEVER REC	
34	3-364-953-01	CABINET (REAR)	
35	3-397-809-01	HANDLE	
36	1-575-951-11	CORD, SPEAKER	
37	3-321-122-01	CUSHION, MICROPHONE	
38	3-397-814-01	LID, BATTERY CASE	
39	3-397-812-01	BATTERY SPRING (+/-)	
40	3-397-813-01	BATTERY SPRING (-)	
41	3-397-811-01	HOLDER P/T	
42	3-703-135-01	SCREW, TAPPING +PWH 3X8	
43	X-3362-953-1	FINE TUNING ASSY, KNOB	
ANT1	1-501-482-11	ANTENNA, TELESCOPIC	
SP101	1-503-492-11	SPEAKER	
SP102	1-503-492-11	SPEAKER	
T401	⚠ 1-448-779-11	TRANSFORMER, POWER (AU, UK)	
T401	⚠ 1-448-780-11	TRANSFORMER, POWER (AEP, G, IT, EE1)	

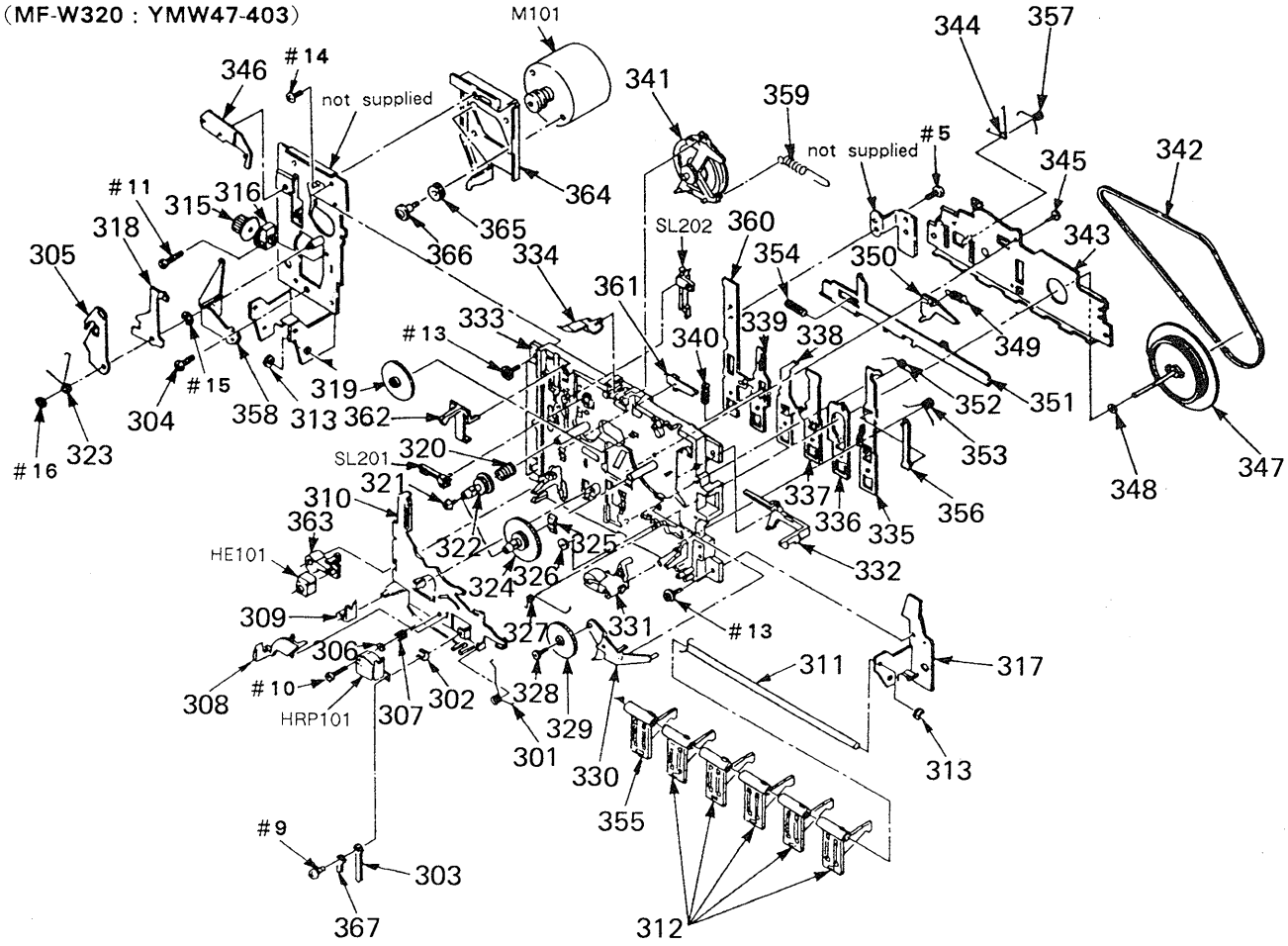
4-2. MECHANISM DECK (A)
(MF-W320 : YMW47-403)



No.	Part No.	Description	Remarks
201	3-391-078-01	PINCH SPRING	
202	3-390-821-01	SPACER	
203	*3-390-819-01	LUG	
204	4-894-982-01	S ARM	
205	*4-894-984-01	FUNCTION LEVER	
206	3-390-823-01	WASHER, F	
207	4-894-955-01	C SPRING	
208	4-894-956-01	TAPE SENSOR	
209	4-895-016-01	TAPE GUIDE	
210	*4-895-015-01	HEAD BASE	
211	*3-391-080-01	SHAFT C (A DECK)	
212	3-349-134-01	BASE, BUTTON	
213	3-391-079-01	E RING	
214	4-894-989-01	SPRING	
215	3-390-844-01	GEAR	
216	3-390-843-01	HOLDER, GEAR	
217	*3-391-082-01	HOLDER BUTTON L	
218	4-894-999-01	SPRING	
219	4-894-964-01	F GEAR	
220	4-894-954-01	C SPRING	
221	3-390-803-01	BUSHING (D)	
222	4-894-953-01	S REEL	
223	4-894-983-01	C SPRING	
224	X-3391-004-1	T REEL ASSY	
225	3-390-838-01	T SPRING	
226	4-894-969-01	N WASHER	
227	4-894-967-01	SPRING	
228	4-894-960-01	BUSH	

No.	Part No.	Description	Remarks
229	4-894-961-01	IDLER GEAR	
230	4-894-962-01	IDLER ARM	
231	X-3391-001-1	PINCH ARM ASSY	
232	4-894-980-01	EJECT ARM	
233	4-894-968-01	CHASSIS ASSY	
234	4-894-966-01	SPRING	
235	4-895-011-01	PAUSE LEVER W	
236	*4-894-987-01	S.E LEVER	
237	*4-894-988-01	FF LEVER W	
238	*4-894-990-01	REW LEVER	
239	*3-391-053-01	PLAY LEVER	
240	3-390-827-01	SPRING	
241	X-3391-003-1	POWER ARM ASSY	
242	3-390-816-01	BELT, SQUARE	
243	*4-894-977-01	BACK PLATE	
244	4-894-978-01	SPRING	
245	3-390-822-01	BUSHING (C)	
246	3-396-796-01	BELT	
247	X-3391-002-1	FLYWHEEL ASSY	
248	4-894-976-01	P WASHER	
249	3-390-809-01	SPRING	
HP101	1-543-727-11	HEAD (PLAYBACK)	
SL101	1-571-555-11	SWITCH, LEAF (DECK-A PB)	
SL102	1-570-715-11	SWITCH, LEAF (DECK-A FF/REW)	

4-3. MECHANISM DECK (B)
(MF-W320 : YMW47-403)



No.	Part No.	Description	Remarks
301	3-391-078-01	PINCH SPRING	
302	3-390-821-01	SPACER	
303	*3-390-819-01	LUG	
304	3-682-147-31	SCREW (BYTT WH 2.6X4)	
305	4-895-004-01	LOCK PLATE	
306	3-390-823-01	WASHER, F	
307	4-894-955-01	C SPRING	
308	4-894-956-01	TAPE SENSOR	
309	4-895-016-01	TAPE GUIDE	
310	*4-895-015-01	HEAD BASE	
311	*3-393-881-01	SHAFT (B DECK)	
312	3-349-134-01	BASE, BUTTON	
313	3-391-079-01	E RING	
315	3-390-844-01	GEAR	
316	3-390-843-01	HOLDER, GEAR	
317	*3-391-081-01	HOLDER BUTTON R	
318	4-895-005-01	UNLOCK PLATE	
319	4-894-964-01	F GEAR	
320	4-894-954-01	C SPRING	
321	3-390-803-01	BUSHING (D)	
322	4-894-953-01	S REEL	
323	4-895-003-01	SPRING	
324	X-3391-004-1	T REEL ASSY	
325	3-390-838-01	T SPRING	
326	4-894-969-01	N WASHER	
327	4-894-967-01	SPRING	
328	4-894-960-01	BUSH	
329	4-894-961-01	IDLER GEAR	
330	4-894-962-01	IDLER ARM	
331	X-3391-001-1	PINCH ARM ASSY	
332	4-894-980-01	EJECT ARM	
333	4-894-968-01	CHASSIS ASSY	
334	4-894-966-01	SPRING	
335	*4-894-986-01	PAUSE LEVER	
336	*4-894-987-01	S.E LEVER	

No.	Part No.	Description	Remarks
337	*4-894-988-01	FF LEVER W	
338	*4-894-990-01	REW LEVER	
339	*3-391-053-01	PLAY LEVER	
340	3-390-827-01	SPRING	
341	X-3391-003-1	POWER ARM ASSY	
342	3-393-880-01	BELT	
343	*4-894-977-01	BACK PLATE	
344	4-894-979-01	SPRING	
345	3-390-822-01	BUSHING (C)	
346	4-895-002-01	P CONNECT LEVER ASSY	
347	X-3391-002-1	FLYWHEEL ASSY	
348	4-894-976-01	P WASHER	
349	3-390-809-01	SPRING	
350	4-894-982-01	S ARM	
351	*4-894-984-01	FUNCTION LEVER	
352	4-894-989-01	SPRING	
353	4-894-999-01	SPRING	
354	4-894-983-01	C SPRING	
355	3-392-147-01	LEVER (R), BUTTON	
356	4-894-985-01	PAUSE ARM	
357	3-393-883-01	SPRING	
358	4-895-006-01	CONNECT LEVER	
359	3-396-831-01	SPRING	
360	*4-894-994-01	REC LEVER	
361	*3-390-811-01	LEVER, REC STOP	
362	4-894-958-01	INTERLOCK ARM	
363	3-391-055-01	E HEAD ARM	
364	*4-895-008-01	MOTOR BRACKET	
365	3-343-897-01	WASHER, RUBBER	
366	3-343-896-01	SCREW, MOTOR	
367	3-390-817-01	LUG	
HE101	1-543-533-11	HEAD, ERESE	
HRP101	1-543-727-11	HEAD (RECORD/PLAYBACK)	
M101	3-393-882-01	MOTOR ASSY	
SL201	1-571-555-11	SWITCH, LEAF(DECK-B PB/REC)	
SL202	1-570-715-11	SWITCH, LEAF(DECK-B FF/REW)	

SECTION 5
ELECTRICAL PARTS LIST

BATT GEQ

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- —XX, —X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA.... : μA...., uPA.... : μPA....
  uPB.... : μPB...., uPC.... : μPC....
  uPD.... : μPD....
- CAPACITORS
  uF : μF
- COILS
  uH : μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

AU : Australian
G : Germany
IT : Italian
EEI : East European

Ref. No.	Part No.	Description			Remark
	1-635-798-11	BATT BOARD			
		**********			
**********					
*	1-635-976-11	GEQ BOARD			
		*********			
		< CAPACITOR >			
C112	1-124-252-00	ELECT	0.33uF	20%	50V
C120	1-124-791-11	ELECT	1.0uF	20%	100V
C121	1-130-489-00	MYLAR	0.033uF	5%	50V
C123	1-161-050-00	CERAMIC	0.0082uF	10%	25V
C124	1-124-463-00	ELECT	0.1uF	20%	50V
C125	1-161-327-00	CERAMIC	0.0033uF	30%	16V
C126	1-130-489-00	MYLAR	0.033uF	5%	50V
C127	1-162-294-31	CERAMIC	0.001uF	10%	50V
C128	1-124-791-11	ELECT	1.0uF	20%	100V
C129	1-124-791-11	ELECT	1.0uF	20%	100V
C130	1-124-791-11	ELECT	1.0uF	20%	100V
C131	1-161-494-00	CERAMIC	0.022uF		25V
C132	1-124-927-11	ELECT	4.7uF	20%	100V
C212	1-124-252-00	ELECT	0.33uF	20%	50V
C220	1-124-791-11	ELECT	1.0uF	20%	100V
C221	1-130-489-00	MYLAR	0.033uF	5%	50V
C223	1-161-050-00	CERAMIC	0.0082uF	10%	25V
C224	1-124-463-00	ELECT	0.1uF	20%	50V
C225	1-161-327-00	CERAMIC	0.0033uF	30%	16V
C226	1-130-489-00	MYLAR	0.033uF	5%	50V
C227	1-162-294-31	CERAMIC	0.001uF	10%	50V
C228	1-124-791-11	ELECT	1.0uF	20%	100V
C229	1-124-791-11	ELECT	1.0uF	20%	100V
C230	1-124-791-11	ELECT	1.0uF	20%	100V
C231	1-161-494-00	CERAMIC	0.022uF		25V

Ref. No.	Part No.	Description			Remark
C232	1-124-927-11	ELECT	4.7uF	20%	100V
C318	1-126-176-11	ELECT	220uF	20%	10V
		< IC >			
IC303	8-759-933-38	IC BA3822LS			
		< RESISTOR >			
R120	1-249-414-11	CARBON	560	5%	1/4W
R121	1-249-417-11	CARBON	1K	5%	1/4W
R122	1-249-417-11	CARBON	1K	5%	1/4W
R123	1-249-417-11	CARBON	1K	5%	1/4W
R124	1-249-421-11	CARBON	2.2K	5%	1/4W
R220	1-249-414-11	CARBON	560	5%	1/4W
R221	1-249-417-11	CARBON	1K	5%	1/4W
R222	1-249-417-11	CARBON	1K	5%	1/4W
R223	1-249-417-11	CARBON	1K	5%	1/4W
R224	1-249-421-11	CARBON	2.2K	5%	1/4W
R315	1-249-411-11	CARBON	330	5%	1/4W
		< SWITCH >			
SW5	1-572-423-11	SWITCH, PUSH (4 KEY) (DUBBING SPEED)			
		< VARIABLE RESISTOR >			
VR101	1-241-173-11	RES, VAR, SLIDE 100K/100K (100Hz)			
VR102	1-241-173-11	RES, VAR, SLIDE 100K/100K (300Hz)			
VR103	1-241-173-11	RES, VAR, SLIDE 100K/100K (1kHz)			
VR104	1-241-173-11	RES, VAR, SLIDE 100K/100K (3kHz)			
VR105	1-241-173-11	RES, VAR, SLIDE 100K/100K (10kHz)			
VR106	1-241-172-11	RES, VAR, SLIDE 20K/20K (VOLUME)			
VR107	1-241-171-11	RES, VAR, SLIDE 100K (BALANCE)			

JACK LED MAIN

Ref.No.	Part No.	Description	Remark
	* 1-635-978-11	JACK BOARD	
		**********	
	3-321-122-01	CUSHION, MICROPHONE	
		< MICROPHONE >	
ECM1	1-542-157-11	MICROPHONE, ELECTRET CONDENSER (MIC)	
		< JACK >	
J301	1-562-837-11	JACK (PHONES)	
		< RESISTOR >	
R301	1-249-411-11	CARBON 330 5% 1/4W	
	* 1-635-977-11	LED BOARD	
		*********	
		< DIODE >	
D305	8-719-918-76	LED GL-3PR9 (OPR/BATT)	
	* A-3261-409-A	MAIN BOARD, COMPLETE (EXCEPT EE1)	
	* A-3261-410-A	MAIN BOARD, COMPLETE(EE1)	
		********************	
		< FILTER >	
BPF1	1-236-392-11	FILTER, BAND PASS (EE1)	
BPF1	1-236-895-11	FILTER, BAND PASS (EXCEPT EE1)	
		< CAPACITOR >	
C1	1-162-207-31	CERAMIC 22PF 5% 50V	
C4	1-161-377-00	CERAMIC 0.0047uF 30% 16V	
C5	1-162-198-31	CERAMIC 8.2PF 10% 50V (EE1)	
C5	1-162-207-31	CERAMIC 22PF 5% 50V (EXCEPT EE1)	
C6	1-162-194-31	CERAMIC 3.9PF 10% 50V	
C7	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C8	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C9	1-162-206-31	CERAMIC 20PF 5% 50V	
C10	1-102-959-00	CERAMIC 22PF 5% 50V (EXCEPT EE1)	
C10	1-162-197-31	CERAMIC 6.8PF 10% 50V (EE1)	
C11	1-162-193-31	CERAMIC 3.3PF 10% 50V	
C12	1-124-902-00	ELECT 0.47uF 20% 50V	
C13	1-162-290-31	CERAMIC 470PF 10% 50V	
C15	1-161-494-00	CERAMIC 0.022uF 25V	
C16	1-124-126-00	ELECT 47uF 20% 10V	
C17	1-161-377-00	CERAMIC 0.0047uF 30% 16V	
C18	1-161-494-00	CERAMIC 0.022uF 25V	
C19	1-161-494-00	CERAMIC 0.022uF 25V	
C20	1-123-875-11	ELECT 10uF 20% 50V	
C21	1-123-382-00	ELECT 3.3uF 20% 100V	
C22	1-124-791-11	ELECT 1.0uF 20% 100V	
C23	1-124-463-00	ELECT 0.1uF 20% 50V	
C24	1-161-377-00	CERAMIC 0.0047uF 30% 16V	
C25	1-124-443-00	ELECT 100uF 20% 10V	
C26	1-161-377-00	CERAMIC 0.0047uF 30% 16V	
C27	1-130-486-00	MYLAR 0.018uF 10% 50V	
C28	1-124-927-11	ELECT 4.7uF 20% 100V	
C29	1-130-486-00	MYLAR 0.018uF 10% 50V	
C30	1-124-927-11	ELECT 4.7uF 20% 100V	
C31	1-104-228-00	POLYSTYRENE 0.0015uF 5% 50V	
C32	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C33	1-123-382-00	ELECT 3.3uF 20% 100V	
C34	1-103-741-00	POLYSTYRENE 0.0047uF 5% 50V	
C35	1-162-201-31	CERAMIC 12PF 5% 50V	
C36	1-162-195-31	CERAMIC 4.7PF 10% 50V	
C37	1-162-208-31	CERAMIC 24PF 5% 50V	
C38	1-162-195-31	CERAMIC 4.7PF 10% 50V	
C39	1-104-066-00	POLYSTYRENE 360PF 5% 50V	
C41	1-161-494-00	CERAMIC 0.022uF 25V	
C42	1-162-218-31	CERAMIC 62PF 5% 50V	
C43	1-104-064-00	POLYSTYRENE 300PF 5% 50V	
C44	1-162-198-31	CERAMIC 8.2PF 10% 50V	
C45	1-162-203-31	CERAMIC 15PF 5% 50V	
C47	1-162-208-31	CERAMIC 24PF 5% 50V	
C48	1-161-494-00	CERAMIC 0.022uF 25V	
C49	1-126-233-11	ELECT 22uF 20% 50V	
C50	1-162-286-31	CERAMIC 220PF 10% 50V	
C51	1-162-294-31	CERAMIC 0.001uF 10% 50V (EE1)	
C52	1-161-494-00	CERAMIC 0.022uF 25V	
C53	1-162-282-31	CERAMIC 100PF 10% 50V	
C101	1-162-292-31	CERAMIC 680PF 10% 50V	
C102	1-162-292-31	CERAMIC 680PF 10% 50V	
C104	1-162-292-31	CERAMIC 680PF 10% 50V	
C105	1-124-126-00	ELECT 47uF 20% 10V	
C106	1-130-484-00	MYLAR 0.012uF 5% 50V	
C107	1-124-927-11	ELECT 4.7uF 20% 100V	
C108	1-130-487-00	MYLAR 0.022uF 5% 50V	
C109	1-124-927-11	ELECT 4.7uF 20% 100V	
C110	1-162-286-31	CERAMIC 220PF 10% 50V	
C111	1-124-927-11	ELECT 4.7uF 20% 100V	
C113	1-124-126-00	ELECT 47uF 20% 10V	
C114	1-130-483-00	MYLAR 0.01uF 5% 50V	
C115	1-161-494-00	CERAMIC 0.022uF 25V	
C116	1-162-294-31	CERAMIC 0.001uF 10% 50V	

MAIN

Ref. No.	Part No.	Description			Remark
C140	1-124-902-00	ELECT	0.47uF	20%	50V
C141	1-162-294-31	CERAMIC	0.001uF	10%	50V
C142	1-162-286-31	CERAMIC	220PF	10%	50V
C143	1-124-126-00	ELECT	47uF	20%	10V
C144	1-124-443-00	ELECT	100uF	20%	10V
C145	1-130-497-00	MYLAR	0.15uF	5%	50V
C146	1-124-473-11	ELECT	1000uF	20%	10V
C201	1-162-292-31	CERAMIC	680PF	10%	50V
C202	1-162-292-31	CERAMIC	680PF	10%	50V
C204	1-162-292-31	CERAMIC	680PF	10%	50V
C205	1-124-126-00	ELECT	47uF	20%	10V
C206	1-130-484-00	MYLAR	0.012uF	5%	50V
C207	1-124-927-11	ELECT	4.7uF	20%	100V
C208	1-130-487-00	MYLAR	0.022uF	5%	50V
C209	1-124-927-11	ELECT	4.7uF	20%	100V
C210	1-162-286-31	CERAMIC	220PF	10%	50V
C211	1-124-927-11	ELECT	4.7uF	20%	100V
C213	1-124-126-00	ELECT	47uF	20%	10V
C214	1-130-483-00	MYLAR	0.01uF	5%	50V
C215	1-161-494-00	CERAMIC	0.022uF		25V
C216	1-162-294-31	CERAMIC	0.001uF	10%	50V
C240	1-124-902-00	ELECT	0.47uF	20%	50V
C241	1-162-294-31	CERAMIC	0.001uF	10%	50V
C242	1-162-286-31	CERAMIC	220PF	10%	50V
C243	1-124-126-00	ELECT	47uF	20%	10V
C244	1-124-443-00	ELECT	100uF	20%	10V
C245	1-130-497-00	MYLAR	0.15uF	5%	50V
C246	1-124-473-11	ELECT	1000uF	20%	10V
C301	1-124-463-00	ELECT	0.1uF	20%	50V
C302	1-126-233-11	ELECT	22uF	20%	50V
C303	1-124-902-00	ELECT	0.47uF	20%	50V
C304	1-123-875-11	ELECT	10uF	20%	50V
C305	1-124-126-00	ELECT	47uF	20%	10V
C306	1-126-176-11	ELECT	220uF	20%	10V
C307	1-124-443-00	ELECT	100uF	20%	10V
C308	1-162-286-31	CERAMIC	220PF	10%	50V
C309	1-162-290-31	CERAMIC	470PF	10%	50V
C310	1-104-302-11	POLYSTYRENE	0.001uF	5%	50V
C311	1-124-443-00	ELECT	100uF	20%	10V
C312	1-130-485-00	MYLAR	0.015uF	5%	50V
C313	1-161-377-00	CERAMIC	0.0047uF	30%	16V
C314	1-130-487-00	MYLAR	0.022uF	5%	50V
C315	1-124-925-11	ELECT	2.2uF	20%	100V
C316	1-126-233-11	ELECT	22uF	20%	50V
C317	1-124-927-11	ELECT	4.7uF	20%	100V
C319	1-161-494-00	CERAMIC	0.022uF		25V
C320	1-126-176-11	ELECT	220uF	20%	10V
C321	1-124-119-00	ELECT	330uF	20%	16V
C322	1-161-494-00	CERAMIC	0.022uF		25V

Ref. No.	Part No.	Description			Remark
C329	1-123-382-00	ELECT	3.3uF	20%	100V
C340	1-124-120-11	ELECT	220uF	20%	25V
C342	1-126-101-11	ELECT	100uF	20%	16V
		< FILTER >			
CF1	1-579-079-11	FILTER, CERAMIC			
CF2	1-527-870-00	FILTER, CERAMIC			
		< CONNECTOR >			
CN1	* 1-580-046-11	CONNECTOR 2P			
CN2	* 1-580-044-11	WAFER, CONNECTOR 9P			
CN3	* 1-580-046-11	CONNECTOR 2P			
CN4	* 1-580-049-11	CONNECTOR 10P			
CN5	* 1-580-047-11	CONNECTOR 3P			
CN6	* 1-580-048-11	CONNECTOR 4P			
		< DIODE >			
D1	8-719-107-94	DIODE 1SS202-1			
D2	8-719-987-01	DIODE KDS2236			
D3	8-719-107-94	DIODE 1SS202-1			
D4	8-719-107-94	DIODE 1SS202-1			
D301	8-719-107-94	DIODE 1SS202-1			
D302	8-719-107-94	DIODE 1SS202-1			
D303	8-719-160-34	DIODE RD6.8FB2			
D304	8-719-989-16	DIODE 1S2472			
		< TRIMMER >			
FT1	1-141-328-11	CAP, TRIMMER (FINE TUNING)			
		< IC >			
IC1	8-759-204-01	IC TA7358P			
IC2	8-759-822-90	IC LA1805			
IC301	8-759-822-91	IC LA3246			
IC302	8-759-939-73	IC BA3308			
IC304	8-759-205-82	IC TA7282AP			
		< JACK >			
J101	1-580-045-11	JACK (SPEAKER L)			
J201	1-580-045-11	JACK (SPEAKER R)			
J501	1-580-052-11	JACK BOARD, PIN 2P (CD/LINE IN)			
		< COIL >			
L1	* 1-426-321-11	COIL, RF FM (EXCEPT EE1)			
L1	1-460-119-11	COIL (WITH CORE) (EE1)			
L2	1-406-393-11	COIL, FM OSC (EXCEPT EE1)			
L2	1-460-118-11	COIL (WITH CORE) (EE1)			

MAIN

Ref. No.	Part No.	Description				Remark
L3	1-402-531-11	ANTENNA, FERRITE-ROD (MW)				
L4	1-406-407-11	COIL, LW OSC				
L5	1-402-543-11	COIL, SW ANT				
L6	1-406-414-11	COIL, SW OSC				
L7	1-402-531-11	ANTENNA, FERRITE-ROD (LW)				
L8	1-406-059-00	COIL, OSC				
L101	1-412-457-11	INDUCTOR	2.7mH			
L201	1-412-457-11	INDUCTOR	2.7mH			
		< TRANSISTOR >				
Q1	8-729-900-61	TRANSISTOR DTA114ES				
Q101	8-729-900-80	TRANSISTOR DTC114ES				
Q102	8-729-201-05	TRANSISTOR 2SC2878-B				
Q201	8-729-900-80	TRANSISTOR DTC114ES				
Q202	8-729-201-05	TRANSISTOR 2SC2878-B				
Q301	8-729-900-80	TRANSISTOR DTC114ES				
Q302	8-729-900-80	TRANSISTOR DTC114ES				
Q303	8-729-100-13	TRANSISTOR 2SC2001-K2				
Q304	8-729-100-13	TRANSISTOR 2SC2001-K2				
Q305	1-807-940-11	TRANSISTOR KTC9013				
Q306	8-729-173-38	TRANSISTOR 2SA733-K				
Q307	8-729-904-39	TRANSISTOR DTC114TS				
Q308	8-729-904-39	TRANSISTOR DTC114TS				
Q310	8-729-900-61	TRANSISTOR DTA114ES				
Q311	8-729-900-61	TRANSISTOR DTA114ES				
		< RESISTOR >				
R1	1-249-405-11	CARBON	100	5%	1/4W	
R2	1-249-441-11	CARBON	100K	5%	1/4W	
R3	1-249-441-11	CARBON	100K	5%	1/4W	
R4	1-249-399-11	CARBON	33	5%	1/4W	
R5	1-249-426-11	CARBON	5.6K	5%	1/4W	
R6	1-249-422-11	CARBON	2.7K	5%	1/4W	
R7	1-249-417-11	CARBON	1K	5%	1/4W	
R8	1-249-423-11	CARBON	3.3K	5%	1/4W	
R9	1-249-423-11	CARBON	3.3K	5%	1/4W	
R10	1-249-440-11	CARBON	82K	5%	1/4W	
R11	1-249-404-00	CARBON	82	5%	1/4W	
R12	1-249-425-11	CARBON	4.7K	5%	1/4W	
R13	1-249-423-11	CARBON	3.3K	5%	1/4W	
R14	1-249-425-11	CARBON	4.7K	5%	1/4W	
R15	1-249-423-11	CARBON	3.3K	5%	1/4W	
R16	1-249-431-11	CARBON	15K	5%	1/4W	
R17	1-249-405-11	CARBON	100	5%	1/4W	
R19	1-249-423-11	CARBON	3.3K	5%	1/4W	
R20	1-249-400-11	CARBON	39	5%	1/4W	
R101	1-249-411-11	CARBON	330	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R102	1-249-429-11	CARBON	10K	5%	1/4W	
R103	1-249-422-11	CARBON	2.7K	5%	1/4W	
R104	1-247-887-00	CARBON	220K	5%	1/4W	
R105	1-249-436-11	CARBON	39K	5%	1/4W	
R106	1-247-717-11	CARBON	2.2K	5%	1/4W	
R107	1-249-422-11	CARBON	2.7K	5%	1/4W	
R109	1-249-437-11	CARBON	47K	5%	1/4W	
R110	1-249-420-11	CARBON	1.8K	5%	1/4W	
R112	1-249-432-11	CARBON	18K	5%	1/4W	
R113	1-249-430-11	CARBON	12K	5%	1/4W	
R114	1-249-438-11	CARBON	56K	5%	1/4W	
R115	1-249-413-11	CARBON	470	5%	1/4W	
R116	1-249-408-11	CARBON	180	5%	1/4W	
R117	1-249-430-11	CARBON	12K	5%	1/4W	
R141	1-249-401-11	CARBON	47	5%	1/4W	
R142	⚠ 1-249-451-11	CARBON	2.2	5%	1/4W	
R143	1-247-700-11	CARBON	100	5%	1/4W	
R144	1-249-421-11	CARBON	2.2K	5%	1/4W	
R201	1-249-411-11	CARBON	330	5%	1/4W	
R202	1-249-429-11	CARBON	10K	5%	1/4W	
R203	1-249-422-11	CARBON	2.7K	5%	1/4W	
R204	1-247-887-00	CARBON	220K	5%	1/4W	
R205	1-249-436-11	CARBON	39K	5%	1/4W	
R206	1-247-717-11	CARBON	2.2K	5%	1/4W	
R207	1-249-422-11	CARBON	2.7K	5%	1/4W	
R209	1-249-437-11	CARBON	47K	5%	1/4W	
R210	1-249-420-11	CARBON	1.8K	5%	1/4W	
R212	1-249-432-11	CARBON	18K	5%	1/4W	
R213	1-249-430-11	CARBON	12K	5%	1/4W	
R214	1-249-438-11	CARBON	56K	5%	1/4W	
R215	1-249-413-11	CARBON	470	5%	1/4W	
R216	1-249-408-11	CARBON	180	5%	1/4W	
R217	1-249-430-11	CARBON	12K	5%	1/4W	
R241	1-249-401-11	CARBON	47	5%	1/4W	
R242	⚠ 1-249-451-11	CARBON	2.2	5%	1/4W	
R243	1-247-700-11	CARBON	100	5%	1/4W	
R244	1-249-421-11	CARBON	2.2K	5%	1/4W	
R300	1-249-423-11	CARBON	3.3K	5%	1/4W	
R302	1-249-411-11	CARBON	330	5%	1/4W	
R303	1-249-423-11	CARBON	3.3K	5%	1/4W	
R304	1-249-410-11	CARBON	270	5%	1/4W	
R305	1-249-441-11	CARBON	100K	5%	1/4W	
R306	1-249-437-11	CARBON	47K	5%	1/4W	
R307	1-249-425-11	CARBON	4.7K	5%	1/4W	
R308	1-249-437-11	CARBON	47K	5%	1/4W	
R309	1-249-405-11	CARBON	100	5%	1/4W	
R310	1-259-377-11	CARBON	2.2M	5%	1/6W	
R311	1-249-409-11	CARBON	220	5%	1/4W	
R312	1-249-410-11	CARBON	270	5%	1/4W	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN POWER

Ref. No.	Part No.	Description				Remark
R313	1-249-429-11	CARBON	10K	5%	1/4W	
R314	1-249-393-11	CARBON	10	5%	1/4W	
R316	1-249-429-11	CARBON	10K	5%	1/4W	
R317	1-249-425-11	CARBON	4.7K	5%	1/4W	
R318	1-249-429-11	CARBON	10K	5%	1/4W	
R319	1-249-418-11	CARBON	1.2K	5%	1/4W	
R320	1-249-469-11	CARBON	100K	5%	1/4W	
R322	1-249-405-11	CARBON	100	5%	1/4W	
R323	1-249-423-11	CARBON	3.3K	5%	1/4W	
R324	1-247-698-11	CARBON	68	5%	1/4W	
R326	1-249-399-11	CARBON	33	5%	1/4W	
R327	⚠ 1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R328	1-249-414-11	CARBON	560	5%	1/4W	
R329	1-249-414-11	CARBON	560	5%	1/4W	
R330	1-249-409-11	CARBON	220	5%	1/4W	
R342	1-249-415-11	CARBON	680	5%	1/4W	
R343	1-249-432-11	CARBON	18K	5%	1/4W	
R344	1-249-426-11	CARBON	5.6K	5%	1/4W	
		< SWITCH >				
SW1	1-572-615-11	SWITCH, SLIDE (BAND)				
SW2	1-572-419-11	SWITCH, SLIDE (FUNCTION)				
SW3	1-572-420-11	SWITCH, SLIDE (REC/PB)				
SW4	1-572-421-11	SWITCH, SLIDE (ISS/FM MODE)				
		< TRANSFORMER >				
T1	1-404-741-11	TRANSFORMER				
T2	1-404-925-11	IFT, AM				
T3	1-424-400-11	COIL, FM DET				
T7	1-406-238-11	COIL, OSCILLATION				
		< TRIMMER >				
TC1	1-141-232-00	CAP, TRIMMER				
TC2	1-141-232-00	CAP, TRIMMER				
TC3	1-141-245-00	CAP, TRIMMER	30PF			
TC4	* 1-141-227-00	CAP, TRIMMER	20PF			
TC5	1-141-245-00	CAP, TRIMMER	30PF			
		< VARIABLE CAPACITOR >				
VC1	1-151-680-11	CAP, VAR, PVC (FC1, FC2, AC2) (EXCEPT EE1)				
VC1	1-151-681-11	CAP, VAR, PVC (FC1, FC2, AC2) (EE1)				
		< VARIABLE RESISTOR >				
VR1	1-228-994-00	RES, ADJ, METAL 10K (VCO)				
VR301	1-228-989-00	RES, ADJ, METAL 470 (NORMAL SPEED)				
VR302	1-228-991-00	RES, ADJ, METAL 2.2K (HIGH SPEED)				

Ref. No.	Part No.	Description				Remark
	* 1-635-744-11	POWER BOARD				
		**********				
	1-533-243-11	HOLDER, FUSE				
		< CAPACITOR >				
C401	1-124-887-00	ELECT	3300uF	20%	16V	
C402	1-161-494-00	CERAMIC	0.022uF		25V	
C403	1-161-494-00	CERAMIC	0.022uF		25V	
C404	1-161-494-00	CERAMIC	0.022uF		25V	
C405	1-161-494-00	CERAMIC	0.022uF		25V	
C406	1-130-495-00	MYLAR	0.1uF	5%	50V	
		< CONNECTOR >				
CN7	* 1-580-046-11	CONNECTOR 2P				
		< DIODE >				
D401	8-719-200-02	DIODE 10E2				
D402	8-719-200-02	DIODE 10E2				
D403	8-719-200-02	DIODE 10E2				
D404	8-719-200-02	DIODE 10E2				
		< FUSE >				
F101	⚠ 1-532-285-00	FUSE, TIME-LAG (1.25A 250V)				
		< INLET >				
J401	⚠ 1-526-838-11	INLET, AC 2P (~AC IN)				
		< TRANSFORMER >				
T401	⚠ 1-448-779-11	TRANSFORMER, POWER (AU, UK)				
T401	⚠ 1-448-780-11	TRANSFORMER, POWER (AEP, G, IT, EE1)				
		MISCELLANEOUS				
		**********				
36	1-575-951-11	CORD, SPEAKER				
ANT1	1-501-482-11	ANTENNA, TELESCOPIC				
HE101	1-543-533-11	HEAD, ERASE				
HP101	1-543-727-11	HEAD (PLAYBACK)				
HRP101	1-543-727-11	HEAD (RECORD/PLAYBACK)				
M101	3-393-882-01	MOTOR ASSY				
SL101	1-571-555-11	SWITCH, LEAF (DECK-A PB)				
SL102	1-570-715-11	SWITCH, LEAF (DECK-A FF/REW)				
SL201	1-571-555-11	SWITCH, LEAF (DECK-B PB/REC)				
SL202	1-570-715-11	SWITCH, LEAF (DECK-B FF/REW)				
SP101	1-503-492-11	SPEAKER				
SP102	1-503-492-11	SPEAKER				

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark

ACCESSORY & PACKING MATERIAL
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⚠	1-555-074-00	CORD, POWER (AU)	
⚠	1-558-032-11	CORD, POWER (UK)	
⚠	1-575-131-11	CORD, POWER (AEP, G, IT, EE1)	
*	3-324-066-01	SHEET, PROTECTION	
*	3-357-568-01	INDIVIDUAL CARTON (EXCEPT EE1)	
*	3-362-601-01	INDIVIDUAL CARTON (EE1)	
*	3-397-807-01	CUSHION	
	3-751-942-12	MANUAL, INSTRUCTION (ENGLISH/FRENCH/SPANISH/GERMAN) (AEP, AU, G, UK)	
	3-751-942-41	MANUAL, INSTRUCTION (PORTUGUESE/DUTCH/SWEDISH/ITALIAN) (AEP, IT)	
	3-751-942-61	MANUAL, INSTRUCTION (ENGLISH/GERMAN/POLAND/RUSSIAN) (EE1)	

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HARDWARE LIST

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# 1	7-682-546-04	SCREW +PTT 3X5 (S)
# 2	7-685-651-79	SCREW +BVTP 3X20 TYPE2
# 3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
# 4	7-621-775-40	SCREW +B 2.6X8
# 5	7-621-255-25	SCREW +PTT 2X4 (S)
# 6	7-685-152-19	SCREW +P 3X25 TYPE2 NON-SLIT
# 7	7-682-549-04	SCREW +B 3X10
# 9	7-621-255-15	SCREW +P 2X3
#10	7-621-255-55	SCREW TOTSU P 2X8
#11	7-685-856-01	SCREW +BVTT 2X12 (S)
#12	7-685-133-19	SCREW +P 2.6X6 TYPE1
#13	7-621-770-26	SCREW TOTSU PTTWH 2.6X6
#14	7-621-770-87	SCREW +PTT 2.6X5 (S)
#15	7-624-106-04	STOP RING 3.0, TYPE-E
#16	7-624-190-11	STOP RING 3, TYPE-CS